



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW1919G BYPASS RATIO: 11.6  
 UNIQUE ID NUMBER: 04P20PW200 PRESSURE RATIO ( $\pi_{co}$ ): 33.3  
 COMBUSTOR: TALON X, Block-C  
 ENGINE TYPE: TF RATED THRUST ( $F_{oo}$ ) (kN): 92.8

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
$D_p/F_{oo}$ (g/kN) or SN	0.4	33.2	34.3	2.6
AS % OF ORIGINAL LIMIT	2.0	28.0	32.0	11.0
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			40.0	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			47.0	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			52.0	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			61.0	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 - OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (% $F_{oo}$ )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	0.650	0.00	0.00	20.00	2.0
CLIMB OUT	85	2.2	0.540	0.00	0.00	16.70	1.3
APPROACH	30	4.0	0.200	0.10	3.30	9.80	0.8
IDLE	7	26.0	0.070	0.20	22.20	5.20	0.5
LTO TOTAL FUEL (kg) or EMISSIONS (g)			252	25	2508	2746	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE $D_p/F_{oo}$ (g/kN) or AVERAGE SN (MAX)				0.3	27.0	29.6	2.0
SIGMA ( $D_p/F_{oo}$ in g/kN, or SN)							
RANGE ( $D_p/F_{oo}$ in g/kN, or SN)				0.2-0.4	26.7-27.6	29.4-29.8	1.7-2.3

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	102-103.3
TEMPERATURE (K)	272-278.1
ABS HUMIDITY (kg/kg)	0.00122-0.00221

### FUEL

SPEC	Jet A
H/C	1.94
AROM (%)	17.8-18.4

MANUFACTURER: Pratt & Whitney  
 TEST ORGANIZATION: Pratt & Whitney  
 TEST LOCATION: Mirabel Aerospace Centre - Quebec  
 TEST DATES: 25/03/2018-26/03/2018

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

### REMARKS

- Data from Certification Report PWA-11601
- Block C combustor
- Certification in accordance with Part III, Chapter 2, of Amendment 8 of ICAO Annex 16 Vol. II.
- NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 e) (CAEP/8)

Compliance with Fuel Venting requirements:

x ('x' if complies, 'PR' if pre-regulation, '- ' if information is not available)